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REMARKS

Reconsideration of this application in view of the amendments made to the claims and the following remarks is respectfully requested.

Title

The title has been rejected as not descriptive. The applicant proposes the following title: "Photodiode with Integral Mask." Approval of the new title is respectfully solicited.

The 112 Rejections

Claims 6 and 13-20 were rejected under 35 USC 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The elements of claim 6 were moved into claim 1, so rejections of claim 6 will be discussed with respect to amended claim 1. Claims 6 and 14 have been cancelled, so the rejection of these claims has become moot.

The Examiner states that the "specification never refers to any 'birefringent pattern' as claimed in claims 6 [now in amended claim 1] and 13." However, the specification at page 7 lines 193-194 states "[t]he pitch of the birefringent pattern determines the pitch of the grid lines."

Applicant has amended claims 1 and 13 to now recite that a structure produces a birefringent pattern of light on the photodetector in the preamble and that the pitch of the parallel bars matches the pitch of the birefringent pattern. It is well known to those of ordinary skill in the art that the light passing out to a photodetector forms a birefringent pattern on the photodetector. No new matter is introduced by this amendment, and adequate support for the amended claims is present in the application as originally filed.

Claims 15-20 depend from claim 13. With the changes to claims 1 and 13 and for the reasons noted above, the rejection is traversed.

The Examiner further comments in paragraph 5 on page 2 regarding the disclosure of two different masks. However, none of the claims are specifically rejected in this section.

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Accordingly, the applicant respectfully requests that the Examiner either clarify the reason for the presence of this paragraph in the Office Action or to expressly withdraw the comments.

Claims 6 and 11-20 have been rejected under 35 U.S.C. 112, second paragraph as being indefinite. Claim 6 has been rejected for lacking an antecedent basis for "the parallel lines." Claims 1 and 13 have been amended to recite "parallel bars" in place of the "parallel lines" recitation. Claims 11, 12 and 14 have been cancelled making this rejection moot as to these claims. Claims 15-20 are dependent upon now allowable claim 13 and are therefore allowable as well. Accordingly, this rejection is traversed.

Claims 6 and 14 were rejected as referring to a birefringent pattern because according to the Examiner, an interference pattern is formed on the split detectors. According to the Examiner, a reference to a birefringent pattern is confusing. The applicant notes that the term "birefringent pattern" is well known in the optical arts. A search performed on the United States Patent Office website turned up over 1900 patents using the terms "birefringent" and "pattern" and 8 patents using the exact term "birefringent pattern." The applicant submits that this is ample evidence of the well known nature of the term. Also, claim 14 has been cancelled. Accordingly, the rejection of these claims is traversed.

Claims 11 and 12 have been rejected as confusing in that they are method claims which depend from apparatus claim 6. Claims 11 and 12 have been cancelled making this rejection moot.

The 102 Rejections

Claims 1-3, 6-9, 11 and 13-20 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Killpatrick (EP 0201853). The applicant has carefully studied the Killpatrick reference and believes that the claims in their present form clearly distinguish over the prior art of record.

The present invention is a photodiode for use in a laser gyro system. The diode is formed with a mask for selectively allowing or preventing light from reaching the active surface of the photodiode. The mask is formed preferably of a series of parallel bars of an

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opaque material on the active surface of the photodiode. The laser gyro produces a birefringent pattern on the photodiode. The pitch and/or the spacing of the bars is dependent upon the pitch of the birefringent pattern. By matching the pitch and/or the spacing of the bars to the pitch of the birefringent pattern, the signal to noise ratio of the photodiode is improved.

Killpatrick ('853) teaches a mask for a photodiode having parallel bars, among other shapes.

Killpatrick ('853) does not however discuss the pitch of the bars or the spacing of the bars with respect to the pitch of the birefringent pattern. As noted above, this is not a trivial difference. This produces an enhanced signal to noise ratio output signal from the photodiode. Because the present claims recite structure and process not taught or suggested by Killpatrick ('853) the rejection of these claims under 35 U.S.C. 102 (b) is traversed.

The 103 Rejections

Claim 10 has been rejected under 35 U.S.C. 103(a) as being obvious in light of Killpatrick ('853). Claim 10 recites structure for making the parallel bars from blue chrome. Claim 10 presently depends from allowable claim 7 and therefore is allowable as well. Accordingly, the rejection of claim 10 is traversed.

Claims 1, 4, 5, 7, 11 and 12 have been rejected under 35 U.S.C. 103(a) as unpatentable over Killpatrick ('792). Killpatrick ('792) teaches a laser intensity detector with two photodiodes and a mask . The mask is formed as an aperture having certain size limitations and may be generally circular.

Claims 4, 5, 11 and 12 have been cancelled making the rejection of these claims moot.. Claims 1 and 7 have been amended to recite a mask formed from parallel bars having specific requirements. Such a mask is not taught or suggested by Killpatrick ('792). Accordingly, the rejection of claims 1 and 7 as obvious from Killpatrick ('792) is traversed.

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CONCLUSION

All of the claims remaining in this application should now be seen to be in condition for allowance. The prompt issuance of a notice to that effect is respectfully solicited. If there are any remaining questions, the Examiner is requested to contact the undersigned at the number listed below.

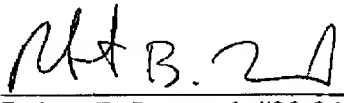
Claims pending – 1, 3, 7-10, 13 and 15-20.

Claims cancelled – 2, 4-6, 11-12, and 14.

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